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OBSERVATIONS CONCERNING THE ORGANIZATION OF
SCHOOLS AND CERTAIN PHASES OF EDUCATIONAL
WORK IN GERMANY. IV
(Concluded)

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TRADE SCHOOLS

The obligatory continuation schools have developed in some places into trade schools. It is freely admitted in Germany that the most perfect system of obligatory trade schools is found in the city of Munich. English admirers considered it so excellent that a bill has been presented in Parliament intended to establish such schools in England. The details of the Munich organization are stated in the bill giving full credit to its excellencies.

In Munich six large and a number of smaller trade school buildings are exclusively used for the theoretical and practical instruction of the apprentices of the various trades. These buildings contain shops that are fitted out with the most modern equipment in tools, apparatus, and machinery. The instructors are teachers, engineers, architects, artists, and master-mechanics.

The aim of the schools is *the formation of the habit of careful and exact work* and the systematic introduction to all the essential details of the work required in the respective trades. The school is to counteract the tendency of modern shops to turn the boys' work to profit by limiting them to a few manipulations in a small field of their trade, leaving them helpless and ignorant in regard to all the rest.

A nation that is in the race for industrial supremacy cannot hope to win unless its workers are trained to be exact, thorough, and intelligent. The trade schools are doing a grand work toward the accomplishment of this aim, while their influence as ethical and cultural centers on the army of adolescent youths is hardly less pronounced. The feature to be specially emphasized is the

compulsory attendance of all boys till they are at least seventeen years old, which places them under educative and protective influence during that period of life when they are in special need of guidance and advice.

The co-operation of employers with these schools is wonderful; individuals and corporations make voluntary contributions to funds, donate material, tools, models, and the most expensive machinery. All factors seem to combine to make the trade schools a growing success.

The courses extend over three, in some trades over four years, and are carefully graded. Attendance beyond the legal requirements is encouraged.

All trade schools have special classes for journeymen in which skilled workmen receive advanced theoretic and practical instruction. Many are fitted to take responsible positions and some develop into successful teachers of the schools which they have so long attended.

It is remarkable to what extent the study of science and art supplements the practical work done in the shop. Drawing and painting in all their branches, especially with reference to the artistic trades, is fundamental, as well as the study of style and of beautiful productions of former centuries. While famous historic models are carefully studied and imitated, originality of conception and design is also encouraged.

The workers are warned from the beginning, and learn to appreciate during the course, that modern mechanics and artisans require, besides practical and artistic skill, a scientific training, and that considerable knowledge of mathematics, physics, chemistry, mechanics, and statics is indispensable to the highest success. Especially in the schools for the building trades these subjects find extensive room in the programs.

At a fine exhibition of the furniture industry and of interior decoration, held last summer at Berlin, a very notable feature was the exhibit of the Berlin trade school for cabinet-makers, turners, and wood-carvers. It represented in a most striking and beautiful manner the great ability of the members of that school and the splendid work done under the influence of competent instruction,

and of the devoted study of some of the most famous furniture of former times. Several of the most artistic pieces had each a value of \$450. The exhibit was not for sale, but remains with the school for instructional purposes. This school is exceptionally well supplied with historical models.

Course for masters of various trades are also conducted. I visited such a class in Zürich that was attended by more than twenty masters who had come from all parts of Switzerland to spend ten days perfecting themselves in the latest developments of lithography. The progress of the art was discussed in lectures and illustrated by practical demonstrations in the shops.

It is evident that such extensive, systematic, and successful provisions for training the workers, from the masters down to the youngest apprentices, must result in elevating considerably the efficiency and productive power of the nation.

The large and fine collections of the museums of the large and many of the smaller cities supplement very effectively the efforts of the schools. A most beautiful building, housing a school for the artistic trades in Dresden, is directly connected with a museum. The trade school in Zürich, Switzerland, an excellent institution, is adjacent to the National Museum containing most precious collections, among them many interiors taken from famous homes, convents, castles, and public buildings. The refining influence of these beautiful objects of the past cannot be overestimated.

Excellent classified collections of materials, photographs, engravings, books, and periodicals are at the service of the learners in the trade schools.

The school at Zürich has arranged regular exhibits of various trades that have proved very instructive, not only to the members of the school and to tradesmen, but also to the public, who are admitted free of charge. These exhibits are changing every three or four weeks. When I visited the school, the exhibition rooms had been transformed into a suite of many apartments furnished and decorated completely to illustrate beauty and comfort in homes of the middle class. This was to be followed by an exhibit of homes for laborers, and later by one of the most exquisite furnishings of houses for the wealthy. Artists, manufacturers, and

merchants furnish all that is needed and co-operate with the director of the school to make these exhibits models of taste and workmanship.

In connection with the trade schools may be mentioned the powerful influence that comes from the grand collections of the Deutsche Museum at Munich containing the masterpieces of natural science and technology in original models and demonstrations. Each branch of human industry is represented in its development by numerous models, and the collections constitute one of the grandest examples of objective teaching that can be imagined. The mining of ores, the preparation and working of metals, for instance, is so plainly and amply illustrated that no other form of instruction can equal it. Stones used as building-material are represented by portions of buildings, some of them hundreds of years old, to show the effects of weathering on various materials under the same climatic conditions. The development of house-building, of bridge-building, of ship-building, of electro-technics, is illustrated in the same manner. These few examples may suffice to indicate the valuable aid which the trade and technical schools derive from these precious collections.

The great fundamental principle, so prominent in German schools, of teaching objectively by appealing directly to the senses, finds its most perfect exemplification in such masterly and comprehensive exhibits of models as those of the Deutsche Museum.

PHYSICAL CARE

Physical training receives much attention in Germany and Switzerland. Large and well-equipped halls for *gymnastic exercises* are connected with nearly all schools and many of the playgrounds are fitted out with apparatus. Two to three hours a week of the regular class time are set aside for systematic gymnastic drill. The pupils of all classes of schools are obliged to take part in these exercises. Besides the regular school grounds, many *playgrounds* have been established, and the movement for increasing their number is advancing very rapidly. Some of the playgrounds are truly ideal and are located in beautiful surroundings. In some cities attendance at play is compulsory and all classes

receive the benefits of healthful sports under the leadership of teachers who have taken special courses to fit them for this work.

The modern school buildings are provided with *shower baths*. These are very roomy, light, airy, and invitingly bright, being constructed of white tiles. They are constantly in operation, classes using them in rotation; attendance of pupils, however, is optional with the parents.

Where rivers or lakes present the opportunities, open-air bathing is encouraged and *swimming* is taught.

Medical inspection is general and the records kept are very interesting. Some of these are extensive, giving a minute account of the family and personal history, others are simple and brief. The records of the backward and exceptional children are the most instructive and include the observations of teachers during the years of the child's school attendance.

At the annual congress of the association for school hygiene which was held from May 31 to June 2 at Dessau, the question of the extent of medical supervision and the extent of the records to be kept was one of the subjects of reports and animated discussions. These conventions are attended by prominent school physicians and specialists, educators, representatives of educational departments of states, and by military officers; they are of great importance, as they tend to unify the efforts for the physical welfare of the children in all parts of the empire.

Several cities have established *open-air schools in the woods* (*Waldschulen*) for sickly children, and my visits to these schools at Charlottenburg near Berlin and at Wesloe near Lübeck convinced me that a great deal can be done for the relief and cure of children in poor health by simple and rather inexpensive means, while at the same time instruction in the essentials of school work is continued.

These schools are located in fine old forests on carefully selected grounds. The buildings are few and of simple construction, just offering protection against unfavorable weather. The children spend all day in the open air. Nearly all instruction is given in the forenoon and every lesson is followed by a period of play or active exercise. After the noonday meal a long period of enforced

rest is considered very essential, and this is followed by play, work in the school garden, observations in connection with nature-study, construction of geographical reliefs in sand, and similar occupations; there are also occasional excursions to places in the neighborhood.

The meals are simple but nourishing; milk is given several times a day. In the evening the children walk a short distance to reach the car that takes them home.

Besides these *Waldschulen* there are numerous *recreation resorts in the woods* (*Walderholungsstätten*) that are conducted in the same manner without furnishing regular and systematic instruction. Improvement of health by constant life in the fresh air, by play, gardening, and other pleasant occupations, by rest and proper feeding, is the aim of these resorts.

The members of the forest schools and resorts are selected by teachers and school physicians; medical supervision is, of course, more frequent, more exact and minute than that of the regular pupils. The number of applicants is always greater than the capacity of schools and resorts. The parents who are able to do so, pay for the transportation and feeding of their children. The results of the open-air life are very satisfactory, as nearly all children gain in weight, strength, cheerfulness, and ability to work.

The degenerating influences of city life on the population of large cities are felt in Germany as elsewhere, and it is recognized that a return to nature is one of the most potent remedies. As the poorer children living in crowded quarters are especially in need of recreation and removal from the city, many thousands of them are sent every year to the sea coast, to lake resorts in the woods, and to the mountains, where they remain in groups of 25 or 30 for three or four weeks. This branch of physical care is splendidly organized under the name of *vacation colonies* and cannot be too highly recommended.

Frequent *outings of classes* to the woods or other scenes of beauty, also to places of historic interest in the neighborhood of cities, are a prominent feature of school life in Germany and Switzerland. Not only do these outings furnish recreation and enrich the knowledge of children, but the contact with nature has a most

salutary influence in elevating and purifying the emotions. The joys of a day of roaming in the fields and woods in cheerful company bring strength and hope to the hearts of all children, but especially of those who live under discouraging conditions.

The most perfect form of outings are the *Schülerwanderungen*. These are carefully planned wanderings on foot, usually lasting five or six days, in the most beautiful regions of the country. Thousands of pupils of the three upper grades are formed into groups of about twenty-five boys or girls and each group is placed under the leadership of a sympathetic teacher who has made himself thoroughly familiar with the region to be visited. The preparations for the trip, the discussions between the leader and his group, the study of guidebooks and maps are very interesting and profitable preliminaries. When the time for departure arrives, the children are taken by train, at small expense, to the starting-point of their tramp, and then begins for them an experience that no teaching at school can equal and whose impressions will last a lifetime. During the days of their wanderings, the beauty of nature brings constantly to the children new and pure delights as they proceed. Mind and body are refreshed, hundreds of new and wonderful impressions are gained, and the souls of all are filled with love for the beauty of their fatherland. The friendly relationship that this delightful experience creates between pupils and teachers is valuable to both; they learn to know each other better than at school, and the gratitude of the children for all that teachers do for them during these excursions is an ample reward.

Among all the great and good impressions received in my travels, the remembrance of the numerous classes of happy boys and girls that I met in the beautiful mountains of Saxony and Bohemia, and in Switzerland, the cheerfulness of these children, their pure delight in the wonders of nature, and their joyful and beautiful songs will never be forgotten.